

ALO--WWID-WIPP-1999-0006

Final Report

Occurrence Report

Waste Isolation Pilot Plant

(Name of Facility)

Nuclear Waste Operations/Disposal

(Facility Function)

Carlsbad Area Office

Westinghouse Waste Isolation Div.

(Laboratory, Site, or Organization)

Name: xxxxxxxx**Title:** SURFACE OPERATIONS MANAGEMENT ASST.**Telephone No.:** (505) xxxxxxxx

(Facility Manager/Designee)

Name: xxxxxxxx**Title:** SURFACE OPERATIONS MANAGEMENT ASST.**Telephone No.:** (505) xxxxxxxx

(Originator/Transmitter)

Name:**Date:**

(Authorized Classifier (AC))

1. Occurrence Report Number: ALO--WWID-WIPP-1999-0006

RELATED CONTINUOUS AIR MONITOR EVENTS

2. Report Type and Date: Final

	Date	Time
Notification:	10/11/1999	07:40 (MTZ)
Initial Update:	12/14/1999	09:42 (MTZ)
Latest Update:	12/14/1999	09:42 (MTZ)
Final:	12/30/1999	11:34 (MTZ)

3. Occurrence Category: Off-Normal**4. Number of Occurrences:** 1**Original OR:**

5. Division or Project: WIPP**6. Secretarial Office:** EM - Environmental Management**7. System, Bldg., or Equipment:** Continuous Air Monitors (radiological)**8. UCNI?:** No**9. Plant Area:** Facility-wide**10. Date and Time Discovered:** 10/08/1999 11:00 (MTZ)**11. Date and Time Categorized:** 10/08/1999 11:30 (MTZ)**12. DOE Notification:****13. Other Notifications:**

Date	Time	Person Notified	Organization
10/08/1999	11:45 (MTZ)	FACILITY REPRESENTATIVE	DOE/CAO

14. Subject or Title of Occurrence:

RELATED CONTINUOUS AIR MONITOR EVENTS

15. Nature of Occurrence:

- 10) Cross-Category Items
 - A. Collectively Significant Related Occurrences

16. Description of Occurrence:

Two individual events involving Continuous Air Monitors (CAM) were reviewed and determined to have common aspects related to their initiation. On August 17, 1999 during operational check and alignment activities, a CAM alarm was inadvertently initiated. This CAM monitors exhaust air from the underground waste storage area and the alarm caused an automatic shift of the underground ventilation system into the filtered mode. This ventilation system operating mode causes underground exhaust air to be routed through HEPA filters before exhausting to the environment. Root cause analysis of this event determined that a procedure violation caused the CAM alarm activation. Because this procedure violation did not result in an adverse effect on performance, safety, or reliability (the ventilation system responded as designed), the event was not classified as reportable under DOE Order 232.1A (ORPS). Corrective actions were developed and implemented.

On August 27, 1999, an alarm (later determined to be caused by radon) on this same CAM resulted in

automatic shift of underground ventilation to filtration mode. Shortly after the event, the system was taken out of filtration mode and placed into "bypass" mode. This recovery was made in violation of the governing procedure. Once again, no adverse effect on performance, safety, or reliability was involved.

Examination of the causal factors from the investigative reports on these two events have a common factor of procedure violation. While the events share that commonality, further consideration of the two events has highlighted a more fundamental issue, an issue which is the basis for initiating this occurrence report.

The focus of further investigation and discussion is the common failure of operating personnel to comply with procedures regarding CAMs. The CAM system is not designated as Safety Class or Safety Significant, but forms a fundamental part of the Defense-in-Depth approach used at WIPP to ensure personnel and environmental protection. WIPP management believes that further investigation is warranted, and appropriate action be taken to reinforce procedural compliance in general, and the contribution the CAM system provides to our safety philosophy in particular.

17. Operating Conditions of Facility at Time of Occurrence:

Routine waste disposal mode, maintenance checks in progress

18. Activity Category:

03 - Normal Operations

19. Immediate Actions Taken and Results:

Procedural modifications have been made to clarify and reinforce requirements associated with CAM operation and recovery of facility systems after CAM alarms. Shift instructions and crew meetings have been held to reinforce expectations of strict procedural compliance.

20. Direct Cause:

- 3) Personnel Error
 - B. Procedure Not Used or Used Incorrectly

21. Contributing Cause(s):

- 2) Procedure Problem
 - A. Defective or Inadequate Procedure

22. Root Cause:

- 6) Management Problem
 - E. Policy Not Adequately Defined, Disseminated, or Enforced
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23. Description of Cause:

Findings from the Root Cause Analysis indicate causal factors as follows:

ROOT CAUSE - Facility Operations and Radiological Control management has not consistently enforced a strong level of compliance to Conduct of Operations requirements in the areas of procedural compliance, procedure adequacy, or control of processes.

DIRECT CAUSE - Facility Operations and Radiological Controls personnel, partly as a result of not understanding management expectations, do not consistently make operational decisions that coincide with procedures or conduct of operations requirements.

CONTRIBUTING CAUSES - Some Emergency Response procedures have not received required periodic reviews. As a result, appropriate changes are not always made to reflect current operating philosophy.

24. Evaluation (by Facility Manager/Designee):

The basic causes of the two events are related to Conduct of Operations principles. Remedial actions have served to highlight the importance of these principles. Consideration of necessary longer term actions is ongoing.

25. Is Further Evaluation Required?: No

26. Corrective Actions

(* = Date added/revised since final report was approved.)

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|------------------------------------|---|------------------------------------|-----------------------------|
| 1. | A Conduct of Operations Team will be established under the guidance of the Operations Department manager to assist the operating groups in implementation and consistent application of Conduct of Operations principles. | | |
| | <table border="1"><tr><td>Target Completion Date: 12/31/1999</td><td>Completion Date: 12/30/1999</td></tr></table> | Target Completion Date: 12/31/1999 | Completion Date: 12/30/1999 |
| Target Completion Date: 12/31/1999 | Completion Date: 12/30/1999 | | |
| 2. | The initiation of a CONOPS Team and basic CONOPS principles will be communicated to all employees at an "all-hands" meeting. | | |
| | <table border="1"><tr><td>Target Completion Date: 12/17/1999</td><td>Completion Date: 12/15/1999</td></tr></table> | Target Completion Date: 12/17/1999 | Completion Date: 12/15/1999 |
| Target Completion Date: 12/17/1999 | Completion Date: 12/15/1999 | | |
| 3. | Emergency response procedures will be reviewed and changes submitted as necessary to ensure the procedures clearly specify expected operator actions. | | |
| | <table border="1"><tr><td>Target Completion Date: 12/31/1999</td><td>Completion Date: 12/30/1999</td></tr></table> | Target Completion Date: 12/31/1999 | Completion Date: 12/30/1999 |
| Target Completion Date: 12/31/1999 | Completion Date: 12/30/1999 | | |
| 4. | Develop and implement a formal program to qualify personnel as Radiological Control Engineers. | | |
| | <table border="1"><tr><td>Target Completion Date: 07/01/2000</td><td>Completion Date:</td></tr></table> | Target Completion Date: 07/01/2000 | Completion Date: |
| Target Completion Date: 07/01/2000 | Completion Date: | | |

27. Impact on Environment, Safety and Health:

None

28. Programmatic Impact:

None

29. Impact on Codes and Standards:

None

30. Lessons Learned:

Training and enforcement of Conduct of Operations principles must be a continuing process, and must receive increased attention by facility management.

31. Similar Occurrence Report Numbers:

1. None
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32. User-defined Field #1:**33. User-defined Field #2:**

34. DOE Facility Representative Input:

The FR agrees that the M&OC's continued emphasis on CONOPS integrated at all levels of the organization will result in continued safe operations and adherence to procedural compliance by all personnel. Corrective actions, planned and those completed, are timely and reasonable.

Entered by: xxxxxxxx

Date: 12/30/1999

35. DOE Program Manager Input:

36. Approvals:

Approved by: xxxxxxxx, Facility Manager/Designee

Date: 12/14/1999

Telephone No.: (505)xxxxxxx

Approved by: xxxxxxxx, Facility Representative/Designee

Date: 12/30/1999

Telephone No.: (505) xxxxxxxx

Approved by: Approval delegated to FR

Date: 12/30/1999

Telephone No.:
